

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2005/000627

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl⁷ C07D211/62, 211/78, 223/06, 401/06, A61K31/4418, 31/451, 31/55, 31/454, A61P35/00, 37/02, 37/06, 37/08, 43/00, 15/00, 17/00, 19/02, 19/08, 25/00, 25/02, 27/02, 29/00, 29/02, 31/00,

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl⁷ C07D211/62, 211/78, 223/06, 401/06, A61K31/4418, 31/451, 31/55, 31/454, A61P35/00, 37/02, 37/06, 37/08, 43/00, 15/00, 17/00, 19/02, 19/08, 25/00, 25/02, 27/02, 29/00, 29/02, 31/00,

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

CAPLUS (STN), CAOLD (STN), REGISTRY (STN), MEDLINE (STN)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|--------------|--|-------------------------|
| X Y | WO 2004/002957 A1 (ACTELION PHARMACEUTICALS, LTD.), 08 January, 2004 (08.01.04), (Family: none) | 1, 5-7 2-4, 8, 9, 11 |
| P, X P, Y | WO 2004/105738 A2 (ACTELION PHARMACEUTICALS, LTD.), 09 December, 2004 (09.12.04), (Family: none) | 1, 5-7 2-4, 8, 9, 11 |
| Y | WO 03/101964 A1 (Takeda Chemical Industries, Ltd.), 11 December, 2003 (11.12.03), & JP 2004-285038 A | 2-4, 8, 9, 11 |

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search
15 February, 2005 (15.02.05)

Date of mailing of the international search report
01 March, 2005 (01.03.05)

Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

Faxsimile No.

Telephone No.

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PCT/JP2005/000627

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------|
| Y | JP 8-67678 A (Takeda Chemical Industries, Ltd.), 12 March, 1996 (12.03.96), & EP 652218 A1 & NO 9404252 A & CA 2135440 A & FI 9405281 A & AU 9477738 A & BR 9404403 A & RU 2135471 C1 & HU 68810 A & CN 1107476 A ✓& US 5585385 A & BR 9501976 A | 2-4, 8, 9, 11 |
| Y | JP 7-10844 A (Takeda Chemical Industries, Ltd.), 13 January, 1995 (13.01.95), & EP 585913 B1 & NO 9303133 A & US 5482967 A & CA 2105518 A & AU 9346132 A & FI 9303857 A & HU 67284 A & CN 1090274 A ✓& US 5700810 A | 2-4, 8, 9, 11 |
| Y | WO 02/081457 A1 (GLAXO GROUP LTD.), 17 October, 2002 (17.10.02), & EP 1377558 A1 & JP 2004-52675 A & US 2004/127485 A1 | 2-4, 8, 9, 11 |
| Y | WO 01/025219 A1 (GLAXO GROUP LTD.), 12 April, 2001 (12.04.01), & CA 2386515 A & BR 2000014541 A & JP 2003-511377 A & AU 768780 B2 & NZ 518144 A & EP 1454901 A1 & EP 1460066 A1 & NO 2002001637 A & US 2003/028021 A1 & US 6642240 B2 & US 2004/048862 A1 & US 2004/209893 A1 | 2-4, 8, 9, 11 |

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Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: 10

because they relate to subject matter not required to be searched by this Authority, namely:

Claim 10 pertains to methods for treatment of the human body by therapy and thus relates to a subject matter which this International Searching Authority is not required, under the provisions of Article 17(2) (a) (i) of the PCT and Rule 39.1(iv) of the Regulations under the PCT, to search.

2. Claims Nos.:

because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:

because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

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International application No.
PCT/JP2005/000627

Continuation of A. CLASSIFICATION OF SUBJECT MATTER
(International Patent Classification (IPC))

Int.Cl' 1/00, 1/16, 1/18, 3/00, 5/00, 7/00, 9/00, 11/00, 11/02, 13/02

(According to International Patent Classification (IPC) or to both national classification and IPC)

Continuation of B. FIELDS SEARCHED

Minimum documentation searched (International Patent Classification (IPC))

Int.Cl' 1/00, 1/16, 1/18, 3/00, 5/00, 7/00, 9/00, 11/00, 11/02, 13/02

Minimum documentation searched (classification system followed by classification symbols)

(With respect to scope for search)

The term "optionally substituted" used in claims 1 to 3 and the term "prodrug" used in claims 5, 6, and 11 are unclear as to what structure the compound implies. Even when the statements in the description are taken into account, these terms are not considered to be clearly defined. Therefore, a search was made mainly for the part which is supported by and disclosed in the description.